

Determination of the cohesion coefficient (C) essential on the particle flowability with different sorbitol types

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Particle size and shape play important roles in the powder industries, including the pharmaceutical industry. It is widely accepted that the flow properties of most powderbased products are closely related to the size distribution of the fine particles. Cohesion forces act between the particles, and friction forces between the particles and the walls of a funnel, which influence the flow properties. The multiparticulate dosage forms that are currently at the focus of therapy include hard capsules filled with minitables. Good flowability is especially important during the manufacturing of minitables where the diameter of dies is very small and the filling time is also very short. In this work, different forms of commercial sorbitol were chosen as model material. Accurate measurements or good estimations of particle size are important, although the use of different particle size principles can lead to different results. In our work, a new coefficient (C =cohesion coefficient), which is characteristic of the flow properties, shape and size of the powder particles was calculated, a relationship was found between this coefficient and the angle of repose. It should be noted, that the guidelines of the European Medicine Agency (EMA) suggest the application of a factorial design or an artificial neural network in the development of a dosage form and the new coefficient could be applied to decrease the number of necessary training factors as it combines some of the more important characteristics of the studied materials

Biography

Annamaria Szalay was graduated as pharmacist at the University of Szeged, Hungary. She also obtained postgraduate diplomas in health care management, law and pharmacoconomics. She is proud to be a lecturer of the *American Journal of Pharmacy and Pharmacology* in these fields. Beside, she continues her PhD studies dealing with Pharmaceutical Technology, in the Department of Pharmaceutical Technology, University of Szeged; and proud, that her tutor and consultant is Klara Pintye-Hodi; an internationally well-known technologist.

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